

REMARKS/ARGUMENTS

This is a Response to the Office Action mailed July 27, 2005, in which a three (3) month Shortened Statutory Period for Response has been set, due to expire October 27, 2005. Enclosed is our check to cover the fee for a two-month extension of time, to December 27, 2005. Eighteen (18) claims, including two (2) independent claims, were paid for in the application. Claims 1-19 have been canceled. New claims 20-29 have been added. No new matter has been added to the application. No fee for additional claims is due by way of this Amendment. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090. Claims 20-29 are pending.

Substance of the Interview

This is in response to the Office Action of July 27, 2005, and further to telephone conversations with Randal D. P. Penman, Esq., based on an enquiry dated September 26, 2005. At the Examiner's recommendation, Applicants' attorney has now reviewed the substantive efforts of the Applicants in overcoming the disadvantages of all known and relevant prior art, as that prior art existed on the priority date of August 23, 2002.

Respecting discussions regarding the integration of voice-communication into the system aspect of the present invention, the Applicants have decided not to pursue any claims to the advantages resulting from voice integration at this time, since the benefits of this functionality are primarily experienced only during set up and initialization (or reconfiguration) of the system when being installed (or serviced) at a given remote well-site. The Applicants' instructions are that, since their advantageous method of initializing these remote systems may constitute a separate invention needing to be divided out, they wish to pursue instead claims to the method and system aspects of the core invention that they previously elected for examination, without prejudice to pursuing the aforesaid subject matter by way of continuing application(s).

Respecting discussions regarding the terminology "Intrinsically Safe," Applicants merely confirm here that your attention has previously been directed to UL code 913, according to which United Laboratories is one public organization that recognizes "Intrinsically Safe" as an

industry standard term that is meaningful to a person of ordinary skill in the oil and gas field services industry.

Respecting discussions regarding the state of the art in the oil and gas field services industry on the priority date of this application, namely August 23, 2002, the Assignee was then the only known supplier of such a warning system and service as well as then being in possession of and developing technology (as a direct result of a market demand then going wanting) capable of supplying to its customers any of or the combination of: on-site critical lease sensing, Internet based data transfer, automated alerts, online call-centre 24/7 access to well-site status information, video and digital images of remote production well-site security, and other functionality that led to its current commercial success. Even those few suppliers of related technologies were supplying intrinsically safe devices that either: 1) produced only audible alarms on-site but transmitted no data or alarms outside the bounds of the critical lease zone; or 2) transmitted select data elements gathered off-site in relation only to "down wind" conditions, which information was transmitted over an expensive private network. No supplier had identified either the need for, or assembled the means to, combine even the best features of existing systems, much less to effect additions and improvements over such combination. The Assignee was consequently forced to invest heavily in custom design and development in order to deliver systems embodying aspects of the present inventive combination to its customers in August 2002, since which time other oil and gas field service suppliers have started to imitate the Applicants' system. At the time that the present invention was reduced to practice, there were significant economic and power consumption hurdles to be overcome by a person of ordinary skill in the oil and gas field services industry in order to combine such a new and useful method for capturing and portraying information with respect to airborne noxious gases present in the atmosphere of, or down-wind from, a gas or oil production well-site not having access to the communications and power supply public infrastructure typically associated with populated areas. To implement this new method through a system comprised of a robust and reliable set of existing and custom-built devices was a challenge that made it possible for less skilled personnel to travel to remote areas and quickly set up and place in operation a public protection system offering a set of features that also made it economical to use and understand. In the face of the

ongoing boom in demand for oil and gas, the continually increasing shortages of highly skilled labor (e.g., Electronics Technologists and Technicians) made it advantageous to develop a reliable system implementing a method of well-site monitoring that was easy to use by the personnel available.

Since an increasing base of personnel among suitably skilled labor are competent in the use of the Internet to access web-sites, the choice of Internet Protocol for the transmission of the raw and processed data that the system of the invention sends off-site made it cost effective to deliver online key data (e.g., date, time, SO₂, H₂S, wind speed, wind direction) portrayed in both tabular and graphical formats that make alarm events more apparent and understandable, such that well-site operators can react more quickly and effectively. Seemingly simple variations, like the use of e-mail and text messages sent to a personal computer or cell phone in the event of an alarm condition, now flow naturally from the elegant combination of the present invention. In 2002, the only systems available to well-site operators in the oil and gas production industry were custom-built private networks that could only be deployed in the field by highly-skilled Communication Electronics Technicians. It was enormously expensive for the operators to send such Technicians out to remote areas, where the lack of access to any public Internet communications infrastructure made it necessary to use expensive private channels rented from a very limited number of satellite communication service providers. The Applicants humbly submit that the rapid evolution of these core technologies used by their system is a testament to the Applicants' early recognition of the importance of their invention, not the basis on which to judge it as obvious with the benefit of hindsight and to thereby deny protection for the Assignee's investment foresight.

Further, the Applicants' condition sensing means for sensing atmospheric conditions that cause anomalous output from on-site sensors includes external temperature, pressure and humidity sensors, which factors directly affect the operation of the electrochemical sensors used to detect and identify noxious gases, the use of which condition sensing means provides advance notice of conditions under which a well-site operator may anticipate that the electrochemical sensor readings from its well-sites might tend to "drift" throughout the day, such

that the Applicants' processor means may advantageously be programmed to prevent "false alarm" outputs.

Amendments to the Claims

Applicants have prepared claims 20 to 22 respecting the method aspect of the present invention which is restricted to subject matter not addressed in any of the known prior art, expressly in light of each of Dungan, Adrian, and Meyers as well as over any combinations thereof.

Applicants have prepared claims 23 to 29 respecting the system aspect of the present invention which is restricted to gas or oil production well-sites and intentionally limited by the inclusion of elements not required in any of the known prior art, expressly in light of each of Dungan, Adrian, and Meyers as well as over any combinations thereof.

Rejections Under 35 U.S.C. § 102(b)

In response to the Examiner's objection to the previous claim set now replaced, Applicants respectfully submit that to consider the present invention in terms of having only 2 basic elements would be an oversimplification that cannot be justified, particularly in light of the number of elements included in the new independent claim 23 to a narrower system.

Rejections Under 35 U.S.C. § 103

In response to the Examiner's rejection of the previous claims as obvious in view of various combinations of Dungan (U.S. Patent No. 6,670,887), Adrian (U.S. Patent No. 6,405,135), and Meyers (U.S. Patent No. 6,259,956), Applicants respectfully submit that the primary tests for obviousness need to be carefully applied in the industry context of the present invention, especially given the strong secondary indicia of invention. The objective evidence of non-obviousness includes: commercial success, a long-felt need for the invention, and the failure of others to solve the problem. The portability, flexibility, efficiency, and reliability of the system of the invention are all advantages made possible by the inventive combination of

elements that became necessary because Applicants were unable to locate any solution for the unique problems associated with the remote operating environment of a producing well.

The Applicants further respectfully submit that “Who is that ‘person of ordinary skill in the art’ to whom the Examiner refers?” is a question that must be answered. First, we need to understand the person himself. Is he a competent technician, or a skilled electrical engineer, or a leading-edge scientist? Next, we need to understand what the United States Court of Appeals means by “ordinary skill.” How could this Court have meant that the skill of our leading-edge scientist would be nothing more than “ordinary”? Clearly therefore, the scientist is not the person to whom we must refer for this test. Finally, to what art does the Examiner refer? The oil and gas field services industry is that industry in which the present invention operates and the participants in the industry are those against which the Applicants fairly seek to protect their efforts. These competent technicians of ordinary skill in this industry are not formally trained in telecommunications or gas analysis, but here they had a problem to solve for their customers, which required them to create a novel combination of existing elements from other industries, which effort has advanced the state of the art in their field of endeavor. Without having answers to each of these questions one cannot fairly define either which artisans or what industries may be considered in applying the relevant tests for obviousness as against the claimed combination.

The Applicants submit that the Examiner’s reference to the relevant test is not in issue, but has been further clarified in the recent case: *In Princeton Biochemicals v. Beckman Coulter* (Fed. Cir. 2005) 04-1493 USCA, decided June 9, 2005, by Circuit Judge Rader, the same Judge who decided the seminal case on point: *In re Rouffett* 149 F.3d 1350 (Fed. Cir. 1998) 97-1492. However what remains in issue is the particular “skilled artisan” to whom the test is applied. The Applicants submit that it would be contrary to the underlying purpose of the patent legislation that as the skill level of the relevant artisan increases, applying the test in the manner previously suggested would result in the most talented PhD level scientists obtaining the fewest patents, because everything would be considered obvious if Examiners were to fulfill their role by combining the “common knowledge” of such scientists across different fields of endeavor. In part, the reason that people practicing within specialized fields of knowledge become experts is

because they concentrate on very narrow slices of human endeavor and focus very sharply on the details of human understanding within that narrow field of expertise. To both apply the higher level of understanding and combine it across related but separate fields of study would unfairly lead to the most deserving inventors obtaining the fewest issued patents.

In *In re Rouffett* 149 F.3d 1350 (Fed. Cir. 1998) 97-1492, the court dealt with a satellite based technology according to which each of the inventions being compared was considered from a different perspective. Despite that a high standard of "ordinary skill" was apparent in all, one related to launching satellites, another related to the shape of the "beams" emitted from satellites, and another related to the use of satellites for communication purposes, the court was able to review those teachings from three different but superficially related fields and make a decision uncontaminated by hindsight, respecting which Judge Rader observed that:

"According proper deference to the Board's finding of a lofty skill level for ordinary artisans in this field, this court discerns no clear error in the Board's conclusion that these differences would not preclude a finding of obviousness. While Ruddy does not expressly teach alignment of the fan beam with the apparent direction of the satellite's motion, this court perceives no clear error in the Board's determination that Ruddy would suggest such an alignment to one of skill in this art. Therefore, the Board did not err in finding that the combination of King, Rosen, and Ruddy contains all of the elements claimed in Rouffet's application.

However, the Board reversibly erred in determining that one of skill in the art would have been motivated to combine these references in a manner that rendered the claimed invention obvious. Indeed, the Board did not identify any motivation to choose these references for combination. Ruddy does not specifically address handover minimization. To the extent that Ruddy at all addresses handovers due to satellite motion, it addresses this subject through the selection of orbital parameters. Ruddy does not teach the choice of a particular shape and alignment of the beam projected by the satellite. Thus Ruddy addresses the handover problem with an orbit selection, not a beam shape. The Board provides no reasons that one of ordinary skill in this art, seeking to minimize handovers due to satellite motion, would combine Ruddy with Rosen and King in a manner that would render the claimed invention obvious.

Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. See 35 U.S.C. § 103(a). This legal construct is akin to the "reasonable person" used as a reference in negligence determinations. The legal construct also presumes that all prior art references in the field of the invention are available to this hypothetical skilled artisan. See *In re Carlson*, 983 F.2d 1032, 1038, 25 USPQ2d 1207, 1211 (Fed. Cir. 1993).

As this court has stated, "virtually all [inventions] are combinations of old elements." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698, 218 USPQ 865, 870 (Fed. Cir. 1983); see also *Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1579-80, 219 USPQ 8,

12 (Fed. Cir. 1983) (“Most, if not all, inventions are combinations and mostly of old elements.”). Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be “an illogical and inappropriate process by which to determine patentability.” *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996).

To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. This court has identified three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. In this case, the Board relied upon none of these. Rather, just as it relied on the high level of skill in the art to overcome the differences between the claimed invention and the selected elements in the references, it relied upon the high level of skill in the art to provide the necessary motivation. The Board did not, however, explain what specific understanding or technological principle within the knowledge of one of ordinary skill in the art would have suggested the combination. Instead, the Board merely invoked the high level of skill in the field of art. If such a rote invocation could suffice to supply a motivation to combine, the more sophisticated scientific fields would rarely, if ever, experience a patentable technical advance. Instead, in complex scientific fields, the Board could routinely identify the prior art elements in an application, invoke the lofty level of skill, and rest its case for rejection. To counter this potential weakness in the obviousness construct, the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness.”

In applying 35 U.S.C. § 103(a), Applicants submit that Dungan’s “person of skill” in airborne gas detection is not the same person as that having the applicable content and standard of knowledge for Adriany’s subsurface pollution detection technology or Myers’ online monitoring of liquid storage and dispensing sites, “such that the subject matter as a whole” of the present invention would not have been obvious on August 23, 2002, in light of the teachings of both Dungan and Adriany or Meyers - to a person of ordinary skill in the art of remote gas well-site monitoring, being the art to which the Applicants submit the present invention pertains. Notwithstanding that there is an element of wireless communication involved in each of Dungan and Adriany, a person of ordinary skill in airborne gas detection and alarm systems is unlikely to also be skilled in the use of subsurface chemical pollution detection systems.

The system installations taught by each of the cited prior art references are typically permanent installations located in or near populated areas that have access to a communication infrastructure making implementation much easier and less expensive than the rapid deployment, sometimes temporary installation at remote oil and gas production well-sites to which the new claims have been further restricted. The unknown communication infrastructure available at such remote well-sites is a significant barrier that is overcome by the preferred embodiment taught in respect of the system of the present invention. Control over the high expense associated with any mode of communication across the long distances (from populated areas) of typical installations of the present invention, is another advantage of pre-processing raw data and sending it off-site in accordance with embedded rules that (in the absence of an emergency) delay such transmission to off-peak times and send only essential data, reducing communication uplink usage time. Distributing such data thereafter over the Internet further reduces cost relative to the private networks used by related oil and gas industry technologies prior to August 23, 2002.

The three cited prior art references are:

US6670887 Dungan – a chemical processing “plant” in or near a populated area;

US6405135 Adriany – a storage facility for industrial chemicals (soil pollution);

and

US6259956 Meyers – unattended liquid storage and filling station (a “cardlock”).

Applicants respectfully submit none of the three cited prior art references includes any citation or makes any other reference to each other, nor to the applications described in any of those other items. Additionally, Applicants submit that there is no teaching, suggestion, or motivation to combine Dungan, Adriany, and/or Meyers, either found in the references themselves, or in the knowledge of the relevant person of ordinary skill in each of the arts to which those references relate, or from the nature of any of the problems being solved by the teachings of those references.

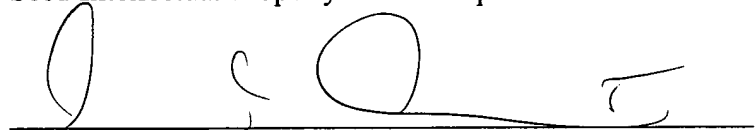
Conclusion

The Applicants submit that the combination of all references cited to date does not teach all claim limitations of the present invention according to the replacement claim set supplied herewith. Applicants observe in closing this response that the novel combination of subject matter described in Figure 3 of the Specification as originally filed is to this day not available from any other supplier. Applicants request and appreciate that the Examiner consider the replacement claim set in light of the careful analysis of obviousness by Judge Rader uncontaminated by the hindsight so easily possible in the rapidly evolving electronics industry.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

Seed Intellectual Property Law Group PLLC

A handwritten signature in black ink, appearing to read 'Frank Abramonte', is written over a horizontal line.

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